A Review of Orthopaedic Surgery in Cats and Dogs Performed in the University Veterinary Hospital (UVH-UPM) for over 3 Years (1994-1997)

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Introduction

Background: *Orthopedics* is a branch of surgery dealing with the preservation and restoration of the function of the skeletal system, its articulations and associated structures (Blood et al. and Studdert, 1988). Most *orthopedic* problems are not typically life threatening, but their treatment is important as the skeletal system support the normal functions of many other organs, and helps to avoid any secondary problems. A general view of the common *orthopedic* problems that occur in cats and dogs would provide clues to better techniques and understanding of surgical management of *orthopedic* problems.

Objectives/Purpose of the work: The objectives of the work included:

To get an overview of the surgical management of *orthopedic* problems in cats and dogs,

To understand the dynamics of using various types of fixation hardware in treatment of various bone and joint diseases, and to analyses the follow-up assessment of the techniques used, and

To identify the complications during the course of treatment of bone and joint diseases.

Materials and Methods

The study was conducted at UVH-UPM for the period from January 1994 to December 1996. The front office registration book, small animal surgery record book, and the radiology records were used to identify *orthopedic* cases seen in the Hospital and treated surgically. The *orthopedic* cases were classified to the various body regions from head to tail *viz*. Head, forelimbs and joints, hind limbs and joints, spine, pelvis, and tail. The causes of the problems, the method of diagnosis, treatment, follow-up and complications if any were recorded (Denny et al., 1993, Ibrahim et al., 1993.

Results and Discussion

Nearly 40% of all surgical cases in cats and dogs presented to the Hospital were *orthopedic* cases, of which more than 90% were due to traumatic causes. Cats made up 47% of the *orthopedic* cases and 53% were dogs. Higher percentages involved were adult animals (>12 months old, 60%) and intact males (56%). The most common problems involved the hind limbs (54%), followed by the pelvis (17%), forelimbs (10%), spine (6%) and head (6%). Various causes of the problems were tabulated from which it was seen that more than 90% were due to traumatic injuries. Road traffic accident showed the highest percentage (27%). The cases caused by diseases (4%) and congenital defects (2%) were also recorded. The treatments used were external fixation (2%), internal fixation (45%), re-constructive surgery (39%) and spinal decompress surgery (4%). A cheaper and easier bone fixation technique using plumber's paste as a modified Kirschner-Ehmer fixation device was successfully tested and it was useful and efficient in fracture repair (Ibrahim et al., 1999a). A modified Denny's et al. technique of elbow repair had also been successfully tried in dogs (Denny et al., 1993; Ibrahim et al., 1999b). Fracture and joint repairs at each anatomical region mentioned before had been tabulated for easy reference. Co-existing problems involved organs or tissues adjacent to the site of *orthopedic* injury. The follow-up study had identified complications in the use of fixation devices and post-operative procedure inadequacies (Egger et al., 1991; Mavin et al., 1991).

Conclusions

The study of bone and joint diseases in cats and dogs tend to focus on the physical nature of the injury and their management, as well as any complications. This study showed that most of the *orthopedic* problems in cats and dogs occur at the hindquarters, mostly involving the hind limbs and the pelvis. Fractures in the forelimbs were less common, except the fore limb fracture in dogs and mandibular symphysis fracture in cats. Immediate attention was necessary when *orthopedic* problems caused trauma to vital organs at the related sites such as lungs, liver and organs of the urinary system. Modified techniques had been successfully employed in managing bone and joint repairs.

Benefits from the study

This study benefits the pet and owner as well as the surgeon and provides student with skills in orthopaedic management.

It increases competence in clinical and radiographic diagnoses of bone and joint diseases in cats and dogs in the training of post-graduates students (Loqman et al., 1997).

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Orthopedic skill of the surgeon had been greatly enhanced by completing "An Advanced Orthopedic Workshop (Synthesis)" in Sydney Australia, for future training of post-graduates students.

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Project Publications in Refereed Journals

None.

Project Publications in Conference Proceeding

None.

Graduate Research

None.

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